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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,258	12/14/2001	Jianping Zhang	1856-23900	5940
31889	7590	03/19/2004	EXAMINER	
DAVID W. WESTPHAL CONOCOPHILLIPS COMPNAY P.O. BOX 1267 PONCA CITY, OK 74602-1267			PARSA, JAFAR F	
			ART UNIT	PAPER NUMBER
			1621	

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/023,258		ZHANG ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Jafar Parsa		1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 14-21, 30-33 and 50-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 14-21, 30-33 and 50-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/19/2003</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. The amendment filed on 1/14/2004 has been entered. Claims 1-5,14-21, 30-33 and 50 are pending. The newly added claims 51-52 are also pending.
2. The rejection of claims 1-5,14-21, 30-33 and 50 under 35 U.S.C. 103 (a) as being unpatentable over Schweitzer et al (WO 01/72928 English equivalent US 2003/0109590) in view of Clark et al (USPN 6,156,809) and further in view of Eri et al (USPN 5,116,879) is maintained for reasons of record recited in the office action mailed on July 8, 2003.
3. Claim 50 is rejected under 35 U.S.C. 102 (b) as being anticipated by Clark et al is maintained for reasons of record recited in the office action mailed on July 8, 2003.
4. The newly added claims 51-52 are also rejected under 35 U.S.C. 103 (a) as being unpatentable over Schweitzer et al (WO 01/72928 English equivalent US 2003/0109590) in view of Clark et al (USPN 6,156,809) and further in view of Eri et al (USPN 5,116,879).

Claims 51 and 52 recite the productivity of the catalytic system (at least 350 gHC/kg.cat.hr). The productivity of the catalytic system is based on gas peclet number and gas superficial velocity. The Schweitzer reference discloses that the gas peclet number of less than one correspond to systems in which the gas phase is perfectly mixed or stirred. Ideal perfectly stirred system corresponds to peclet number tending toward zero (see paragraph 18-19). As the system approaches the perfect mixing, that means high gas superficial velocity and more percentage of reactant converted to products. Therefore, one expects that when a gas peclet number approaches zero, gas

superficial velocity would increase. Therefore, a low peclet number with a high gas superficial velocity have a direct effect on the productivity of the catalytic system.

5. Applicants' argument filed on January 14, 2004 has been fully considered but they are not persuasive.

Applicants state that Schweitzer does not teach the use of a gas peclet number less than 0.175. The examiner notes that the Schweitzer reference expressly teaches that gas peclet number of less than one correspond to systems in which the gas phase is perfectly mixed or stirred. Ideal perfectly stirred system corresponds to peclet number tending toward zero (see paragraph 18-19). Based on the statement disclosed in paragraph 18 and 19, one having ordinary skill in the art would have been motivated to operate a slurry reactor with a gas peclet number near zero, in order to have a perfect mixing, which translate to higher productivity of the catalytic system.

In response to the declaration, the Examiner is not persuaded by the declaration based on the productivity, which resulted from a low gas peclet number (Approaches zero) that requires a high gas superficial velocity, because the gas peclet number is a function of gas superficial velocity and the height of the catalytic bed, therefore one would expect that when a gas peclet number approaches zero, high gas superficial velocity is expected, which would have a direct effect on the productivity of the catalytic system.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

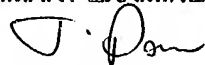
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jafar Parsa whose telephone number is (571)272-0643. The examiner can normally be reached on 8 a.m.-4:30 p.m. (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571)272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**J. PARSA**  
**PRIMARY EXAMINER**

  
Jafar Parsa  
Primary Examiner  
Art Unit 1621

3/15/04